**Year 2 Design and Technology Curriculum – Spring Term**

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| **Theme: Freestanding Structures** | | | | | | | | |
| **Curriculum objectives** | | | **Vocabulary** | | | | | **Links across the curriculum** |
| **To know how to make free standing structure stronger, stiffer and more stable.**  **(Project on a page planning)**  To explore and evaluate arrange of existing products.  To design purposeful, functional, appealing products for themselves and other users based on design criteria.  To generate, develop and model and communicate ideas through talking, drawing, template and mock-ups.  To select from a range of tools, equipment and materials to perform practical tasks.  To evaluate ideas and their products against the design criteria. | | | **Keyword** | Definition | **Keyword** | Definition | | **Geography-** use simple fieldwork and observational skills to study the geography of the school and its grounds and the key physical features.  **Science –** think about the properties of materials that make them suitable or unsuitable for particular purposes.  Art – drawing skills.  **Spoken language** – ask relevant questions to build understanding and their vocabulary.  **Mathematics-** measures, Recognise and name 2D and 3D shapes. |
| Cut | Make an opening or incision. | Frame structure | A structure made of thin components. | |
| Fold | Bend something over on itself. | Stability | The extent to which the structure is likely to fall over if a force is applied. | |
| Join | Connect or fasten things together. | Mock-up | 3D representation of a product. | |
| Fix | To fasten something securely in place or position. | Freestanding structure | A structure that stands on its own base without any attachment to anything else. | |
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| **Prior knowledge:** *What specifically have pupils learned that is relevant to this unit that they are building upon?* | | | | | **Future knowledge:** *What specifically will pupils learn in the future that is relevant to this unit?* | | | |
| Experience of using construction kits, basic tools, and different methods of joining card and paper. | | | | | Children will use their knowledge to help them design and make 3D structures. | | | |
| **Lesson Sequence** | | **Key Knowledge** | | | | **Key Skills** | | |
| 1. To investigate a local playground. | | * Different materials are used to make playground equipment. * Playground equipment is stable and strong to be safe. | | | | * Observational skills | | |
| 1. To investigate how structures can be made more stable, stronger and stiffer. | | * The base of the equipment must be stable. * The joins must be strong so the structure is strong and can withhold weight. | | | | * Investigative skills. What makes the structure stronger/stiffer? | | |
| 1. To design a playground for a Lego character. | | * Drawings and labels represent the design. * The materials selected need to be strong and stiff. | | | | * Creative thinking * Drawing and labelling skills. | | |
| 1. To make a playground for a Lego character. | | * Structures can be strengthened and made more stable | | | | * Cutting, joining, shaping and finishing skills | | |
| 1. To evaluate the playground. | | * Structures need to be strong, stiff and stable to withhold weight. | | | | * Evaluation skills. What went well… * Even better if… | | |
| **Themes and links** | | | | | | | | |
| **Themes** | **Where these are covered:** | | | | | | **Links across the D and T curriculum** | |
| **Investigate** | * Lesson 1 and 2 | | | | | | |  |  | | --- | --- | | **EYFS** |  | | **1** |  | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | | |
| **Design** | * Lesson 3 | | | | | |
| **Make** | * Lesson 4 | | | | | |
| **Evaluate** | * Lesson 5 | | | | | |